



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,029	09/18/2003	Merwin H. Alferness	ROC920030085US1	9131
30206	7590	10/20/2008	EXAMINER	
IBM CORPORATION			NGUYEN, TANH Q	
ROCHESTER IP LAW DEPT. 917				
3605 HIGHWAY 52 NORTH			ART UNIT	PAPER NUMBER
ROCHESTER, MN 55901-7829			2182	
			MAIL DATE	DELIVERY MODE
			10/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/667,029	ALFERNES ET AL.	
	Examiner	Art Unit	
	TANH Q. NGUYEN	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 June 2008.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-23 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 18 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 11; 12-18, 22; 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Olnowich (US 6,098,123).

3. As per claim 1, Olnowich teaches a method of self-adjusting allocation of memory bandwidth in a network processor system [Abstract, lines 1-4; FIG. 5], comprising:

determining an amount of memory bandwidth of a network processor used by a plurality of data types to transmit data through a plurality of active ports [port A and port B are used to transmit data to and from processor 4; port C and port D are used to transmit data to and from network 2 - hence four different data types through ports A, B, C, D (col. 1, lines 30-36; FIG. 5); in a first example, ports C and D are active with port C using 50 MB/s and port D using 50 MB/s - hence 100 MB/s of memory bandwidth of the network processor being used by two data types to transmit data through two active ports (col. 3, lines 51-66); in a second example, ports A-D are active with port A-B using 25 MB/s, port C using 25 MB/s and port D using 50 MB/s - hence 100 MB/s of memory bandwidth of the network processor being used by four data types to transmit data through four active ports (col. 3, line 62-col. 4, line 2)];

determining an amount of memory bandwidth of the network processor used by each of a plurality of data types [in the first example, data type of port A uses 0 MB/s, data type of port B uses 0 MB/s, data type of port C uses 50 MB/s, and data type of port D uses 50 MB/s (col. 3, lines 51-66); in the second example, data types of ports A-B use 25 MB/s, data type of port C uses 25 MB/s, and data type of port D uses 50 MB/s];

dynamically adjusting an amount of memory bandwidth allocated to at least one of the plurality of data types based on the determinations [in the first example, data types of ports A-B are dynamically adjusted to 25 MB/s and data type of port C is dynamically adjusted to 25 MB/s - when processor requires the use of adapter memory 18 (col. 3, lines 51-66; FIG. 5); in the second example, data types of ports A-B are dynamically adjusted to 75 MB/s when port D becomes inactive; in an alternative of the second example, data types of ports A-B are dynamically adjusted to 50 MB/s and data type of port C is dynamically adjusted to 50 MB/s when port D becomes inactive].

Alternatively, data types of ports A-B are interpreted as a nodal processor data type - hence the above system comprising three data types and four ports, instead of four data types and four ports.

4. As per claims 2-7, 11, Olnowich teaches the total amount of memory bandwidth of the network processor used by the plurality of data types being configurable [col. 3, lines 26-col. 4, line 4];

determining whether memory bandwidth may be allocated to at least one of the plurality of data types [col. 3, lines 61-66];

determining a difference between a maximum amount of memory bandwidth of

the network processor that may be used by the plurality of data types (i.e. 100 MB/s) and a total amount of memory bandwidth of the network processor currently used by the plurality of data types [in the first example, when it is determined that there is no remaining bandwidth (i.e. when the difference between maximum amount of memory bandwidth and the total amount of memory bandwidth currently used by the plurality of data types is zero), data types of ports A-B are dynamically adjusted to 25 MB/s and data type of port C is dynamically adjusted to 25 MB/s; in the second example, when it is determined that there is no remaining bandwidth, data types of ports A-B are dynamically adjusted to 75 MB/s when port D becomes inactive (or in the alternative, data types of ports A-B are dynamically adjusted to 50 MB/s and data type of port C is dynamically adjusted to 50 MB/s when port D becomes inactive);

determining whether a port for transmitting data of at least one of the plurality data types may be activated [ports A-B may be activated (col. 3, lines 61-66)];

determining a number of active ports of the network processor used to transmit data of each of the plurality of data types (in the first example, port C and port D are active; in the second example, ports A-B, port C and port D are active); and determining an amount of memory bandwidth allocated to each active port for each of the plurality of data types (in the first example, port C is allocated 50 MB/s and port D is allocated 50 MB/s; in the second example, ports A-B are allocated 25 MB/s [note that if only port A of ports A-B is active, then port A is allocated 25 MB/s; alternatively if only port B of ports A-B is active, then port B is allocated 25 MB/s], port C is allocated 25 MB/s and port D is allocated 50 MB/s);

the amount of memory bandwidth allocated to each active port for a data type is the same (in the first example - port C is active and is allocated 59 MB/s, port D is active and is allocated 50 MB/s).

dynamically activating and deactivating a port for transmitting data of at least one of the plurality of data types (in the first example, ports A-B are dynamically activated; in the second example, port D is dynamically deactivated).

5. As per claim 12, Olnowich teaches an apparatus [3, FIG. 1] comprising:
a port activation logic [4, 28, 30 - FIG. 5], adapted to couple to a memory [18, FIG. 5] of a network processor [3, FIG. 1] and to interact with the memory so as to:

determine an amount of memory bandwidth of the network processor used by a plurality of data types to transmit data through a plurality of active ports;
determine an amount of memory bandwidth of the network processor used by each of the plurality of data types; and dynamically adjust an amount of memory bandwidth allocated to at least one of the plurality of data types based on the determinations (see the rejection of claim 1 above).

6. As per claims 13-18, 22, see the rejections of claim 12 and claims 2-7, 11 above.

7. As per claim 23, Olnowich teaches a network processor system [FIG. 1] comprising:

a memory [18, FIG. 5]; and
a network processor [3, FIG. 1] coupled to the memory, the network processor comprising:

a memory controller [4, 28, 30 - FIG. 5];

a plurality of ports [ports A-D, FIG. 5]; and

a port activation logic, coupled to the memory controller, the plurality of ports and the memory, and adapted to interact with the memory so as to determine an amount of memory bandwidth of the network processor used by a plurality of data types to transmit data through a plurality of active ports; determine an amount of memory bandwidth of the network processor used by each of the plurality of data types; and dynamically adjust an amount of memory bandwidth allocated to at least one of the plurality of data types based on the determinations (see the rejection of claim 12 above).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 8-10, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olnowich.

Olnowich does not specifically teach the amount of memory bandwidth allocated to each active port for an ATM protocol data type being configurable. Olnowich does not specifically teach the plurality of data types including at least one of an ATM protocol data type and an Ethernet protocol data type. Olnowich does not specifically teach the Ethernet protocol data type includes at least one of a Gigabit Ethernet data

type and a Fast Ethernet data type. Essentially, Olnowich teaches a plurality of nodes communicating over an interconnection network [col. 1, lines 9-14; FIG. 1], but does not specify the type of network.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Olnowich to use an ATM protocol data type in order to properly communicate in an ATM interconnection network because it was known in the art to use an ATM protocol data type to properly communicate in an ATM interconnection network

It would also have been obvious to one of ordinary skill in the art at the time the invention was made to use an Ethernet protocol data type in order to properly communicate in an Ethernet interconnection network because it was known in the art to use an Ethernet protocol data type to properly communicate in an Ethernet interconnection network; and further to use a Fast Ethernet data type for high-speed applications in the Ethernet interconnection network and/or to use a Gigabit Ethernet data type for applications that requires even higher speed than the Fast Ethernet data type in the Ethernet interconnection network because it was known in the art to use such data types for such applications.

Response to Arguments

10. Applicant's arguments filed June 20, 2008 have been fully considered but they are not persuasive.

A. Applicant argues that the data types in the **disclosed** invention (i.e. data types being ATM **and** Ethernet) are different from what the examiner considers as data

types in Olnowich, that the ports in the **disclosed** invention (i.e. ATM ports **and** Ethernet ports) are different from what the examiner considers as ports in Olnowich, that the **disclosed** invention prevents corruption of Ethernet data types – hence arguing that Olnowich fails to show certain features of applicant's invention. The arguments are not persuasive because the features upon which applicant relies (i.e., the data types being ATM **and** Ethernet; the ports being ATM ports **and** Ethernet Ports; and preventing corruption of Ethernet data types) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

B. Applicant argues that one skilled in the art would only expect one type of data in Olnowich. The argument is not persuasive because there is nothing in the claims that precludes the examiner from considering that Olnowich teaches a plurality of data types, and because there is no evidence that one skill in the art would expect only one type of data in Olnowich.

C. Applicant also appears to argue that the **disclosed** network processor is different from what the examiner considers as network processor in Olnowich. The argument is not persuasive because there is nothing in the claims that precludes the examiner from considering that Olnowich teaches a network processor.

While the examiner understands that Olnowich's invention may be different from applicant's **disclosed** invention, it is not sufficient to merely argue that the **disclosed** invention is different. When applicant claims the invention broadly, applicant should

expect a broad interpretation of the claims. For patentability, the claims need to include features that would preclude Olnowich from teaching the invention.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TANH Q. NGUYEN whose telephone number is (571)272-4154. The examiner can normally be reached on M-F 9:30AM-7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alford Kindred can be reached on 571-272-4037. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Application/Control Number: 10/667,029
Art Unit: 2182

Page 10

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TANH Q. NGUYEN/

Primary Examiner, Art Unit 2182

TQN
October 18, 2008